



ASX Code: ZMI September 2020

Rathdowney Zinc/Lead Project
Advanced Exploration in Producing Mineral Province



## The Project, Team and Plan to Progress Development



- Project located in established Zinc mining province with existing infrastructure
- Large land position 2,400km<sup>2</sup> covering about 130km of mineralised Rathdowney Trend first time
   consolidated
- Updated JORC Inferred Resource of 11.3 Mt at 9.0% Zn+Pb (5.0% ZnEq cut off)<sup>1</sup> for > 1 million tonnes
  of contained Zn+Pb
- Excellent metallurgical performance: high quality, marketable, Zinc and Lead concentrates produced
- Increasingly attractive zinc fundamentals
- Significant leverage at ~\$4m Enterprise Value (EV)
- Experienced board and management team with considerable operating experience within Europe

1 Refer to ASX announcement made on 8 Sept 2020

### **Corporate Overview**



**TICKER** 

**ASX: ZMI** 

SHARES ON ISSUE

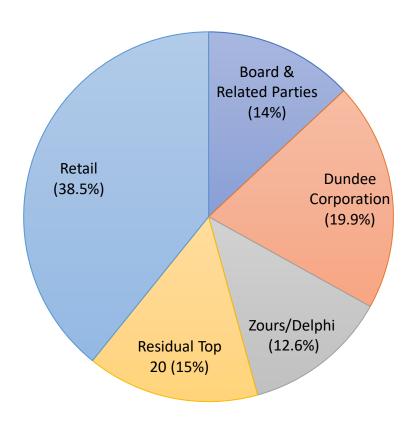
121.5 million

72 million

MARKET CAPITALISATION

~A\$5 million

CASH AT BANK
~A\$0.8 million



 Positioned with a strong share register including significant insider & institutional ownership

- Top 3 groups own ~47%
- Top 20 own ~60%
- Project potential recognised by cornerstone investor Dundee Corporation

#### Notes:

- 1. A breakdown of the Options on issue is available in the announcement lodged with ASX on 13 July 2020
- 2. Details are as at 15 September 2020

## **Experienced and Proven Board of Directors**



#### **Richard Monti**

Chairman

#### **Julian Barnes**

*Non-Executive Director* 

#### **Adrian Goldstone**

Non-Executive Director

#### **Thomas Corr**

Non-Executive Director

Corporate geologist with over 30 years experience in the international resource industry.

Fifty directoryears experience for 15 ASX and TSX listed companies. Geologist with over 37 years experience in major exploration and development projects.

Previously, Executive Vice President of Dundee Precious Metals, founded and led Resource Service Group which ultimately became RSG Global, before being sold to Coffey Mining. In excess of 35 years experience in senior roles including Executive Vice President, responsible for Dundee Precious Metal's major projects in Europe and Africa.

Uniquely successful in the areas of environmental, social licence and project management and taking new projects through the development process and into construction.

15 years experience in finance and resource sectors in both Australia and Europe.

Responsible for identifying the potential of Kildare and successfully acquiring the projects.

Resides in Ireland.

# **Ireland: A Track Record of Zinc Mine Development**

Ranked first in the world for Zinc discovered per km<sup>2#</sup>





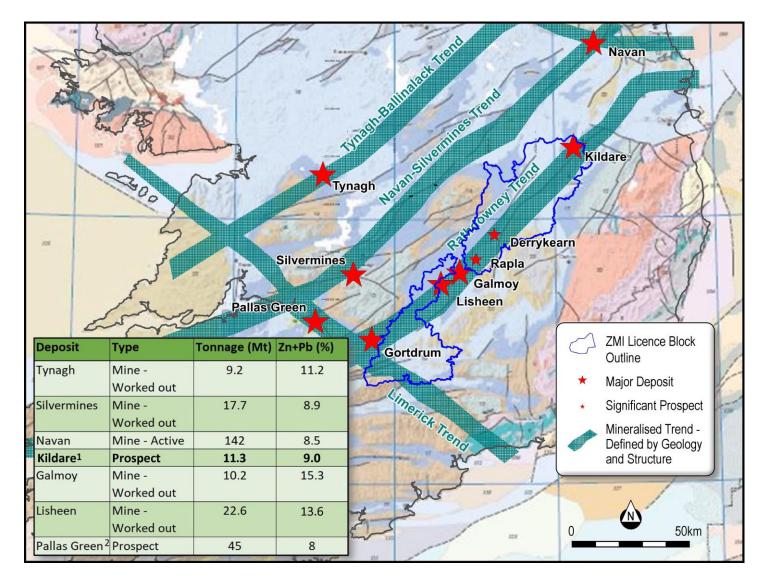
Aerial view of Lisheen Mine whilst in production.

- 50 years of exploration has resulted in the discovery of >25 deposits containing +20Mt of Zinc metal
- Established mining industry ranked 7<sup>th</sup> in the 2019 Fraser Institute Investment Attractiveness Index
- Home to Europe's largest Zinc mine in operation since 1977 - Boliden's Tara Mine
- Grid power, roads, railways & ports
- Modest cost profiles, skilled local workforce
- Numerous smelters within Europe
- 25% corporate tax rate on mining operations
- Royalty: negotiated on a project basis, expected range 1.5% - 3.5% NSR

# http://www.mineralsireland.ie/files/2016 ZincAndLeadInIreland.pdf

# The Rathdowney Project THE RATHDOWNEY TREND – A HISTORY OF PROFITABLE ZINC MINES



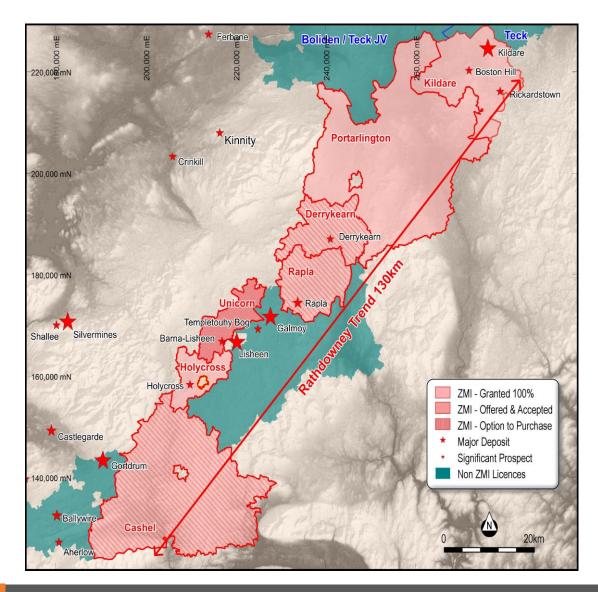


- The Rathdowney Project 2,500km<sup>2</sup> of contiguous and prospective land package covering most of the Rathdowney Trend
- Focus to date has been the Kildare
   Project which hosts an Inferred
   Resource of 11.3Mt at 9.0% Zn+Pb¹
- The Rathdowney Trend hosts the previously mined Lisheen (22.6Mt at 13.6% Zn + Pb) and Galmoy (10.2Mt at 15.3% Zn + Pb) deposits as well as numerous prospects
- Boliden, Teck & Glencore presently exploring and mining

<sup>1</sup> Refer to ASX announcement made on 8 Sept 2020

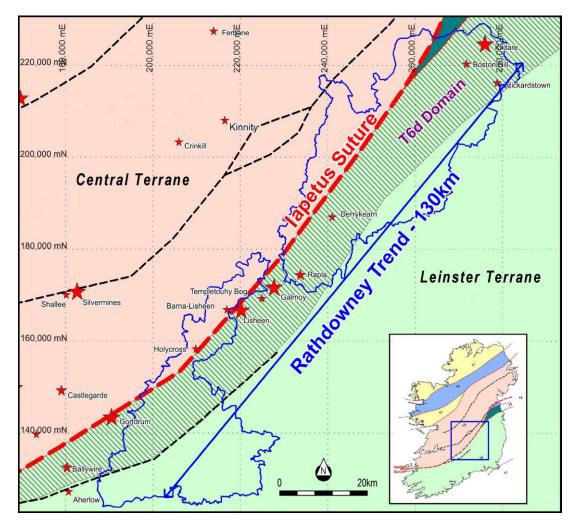
# The Rathdowney Project





- ZMI has now secured 130km (approximately 2,500km<sup>2</sup>) of the mineralised Rathdowney Trend
- The Rathdowney Trend hosts the previously mined Lisheen and Galmoy deposits and numerous other prospects
- The company is now in control of what is arguably one of the most prospective exploration land packages for high grade, large tonnage, Zinc/Lead deposits in the world
- ZMI are the first company to have consolidated a commanding position on the Trend with previous exploration having been restricted to fragmented tenure

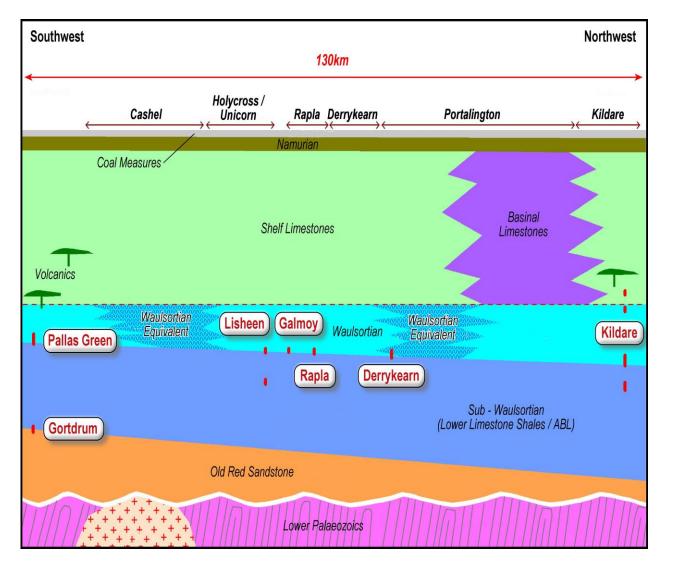
# The Rathdowney Project





- The Rathdowney Trend is a major mineralised trend within the Irish Midlands Orefield
- The trend parallels the major lapetus Suture which controls basin formation and acted as a conduit for base metal rich fluids from the basement to form the Zinc/Lead deposits
- The trend hosts the Lisheen and Galmoy Mines, ZMI's Kildare Deposit and a number of prospects within ZMI controlled ground
- The presence of multiple deposits and prospects throughout the Rathdowney Trend indicate it is highly prospective which augers well for further discoveries

# The Rathdowney Project

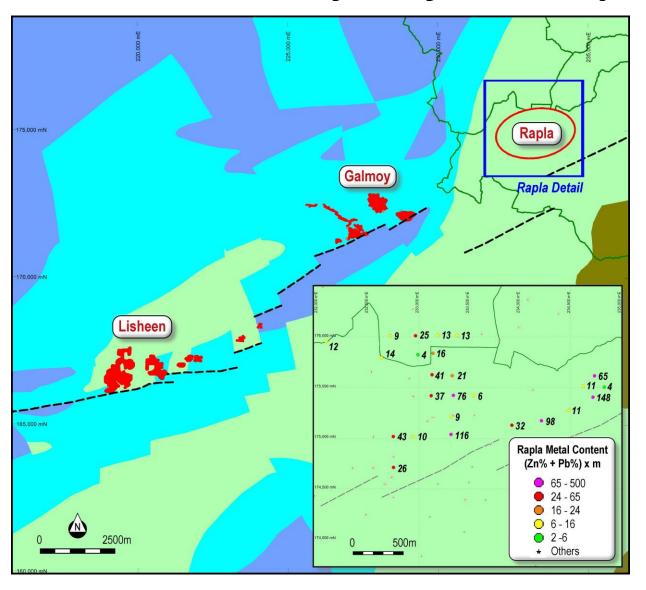




- The primary host rock (Waulsortian Reef)
   occurs in abundance within ZMI's tenure and
   from as shallow as just below surface
- ZMI has built a digital database including >350,000 geochemical samples, 1,754 drill holes and 10 airborne geophysical surveys (Magnetics, EM and Radiometrics)
- Targeting is ongoing via the application of the historic data to identify areas with prospective geology, structural architecture, alteration and mineralisation

Long Section along the Rathdowney Trend showing deposits and prospects (vertical scale exaggerated)

# The Rathdowney Project – Rapla Prospect





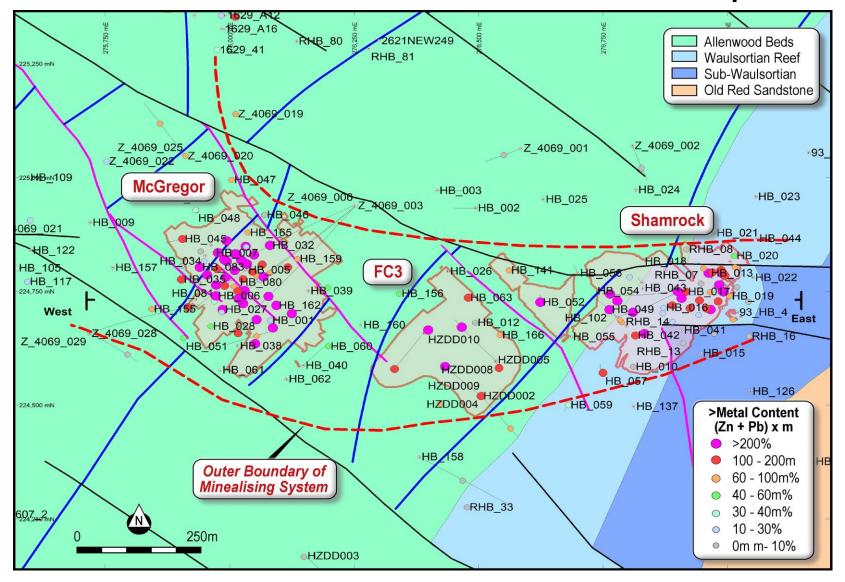
- The Rapla prospect is located approximately
   5km north east of the Galmoy deposit
- Previous drilling has demonstrated mineralisation over an area of 2km x 1km
- The Rapla Prospect exhibits spatial periodicity with known Zinc/Lead deposits along the Rathdowney Trend

#### Source:

http://gis.dcenr.gov.ie/internetPLArea/doc/PublicDocumentDownload?documentId=280555501&DOCLINK=null&DOCUMNETTYPE=53941376

## **Kildare Deposit**

### 11.3Mt at 9.0% Zn + Pb Inferred Resource at 5.0% ZnEq cut off



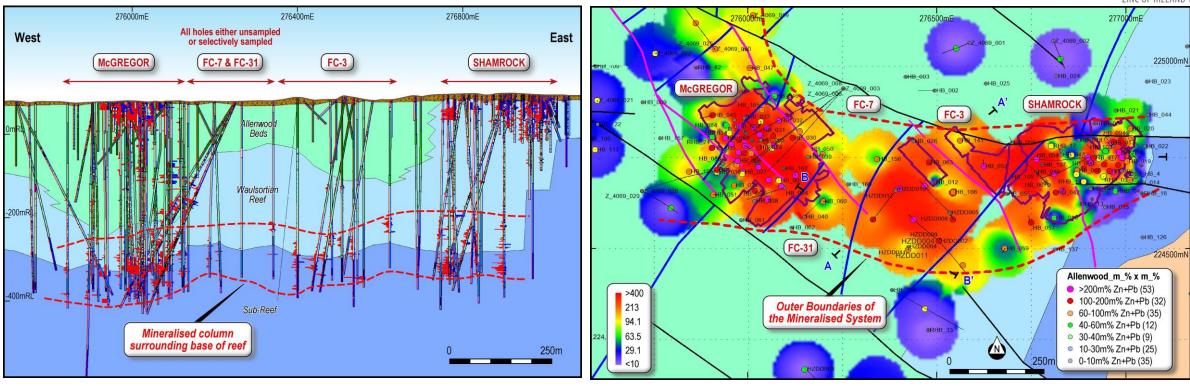


- Located at the northern end of the Rathdowney Project
- Three currently semicontiguous deposits
- Multiple zones of flat-lying mineralisation from near surface for ~500m of vertical extent
- Main zones include high grade (>10%ZnEq) core
- >1 million tonnes of contained
   Zinc and Lead

Additional information relating to the Inferred Resource and ZnEq calculations is included in the Appendix

# Kildare Deposit Part of an extensive mineralized system





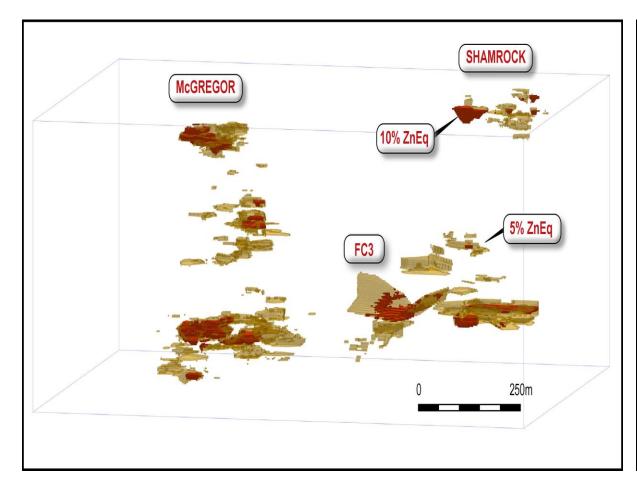
**East-West long Section through deposits** 

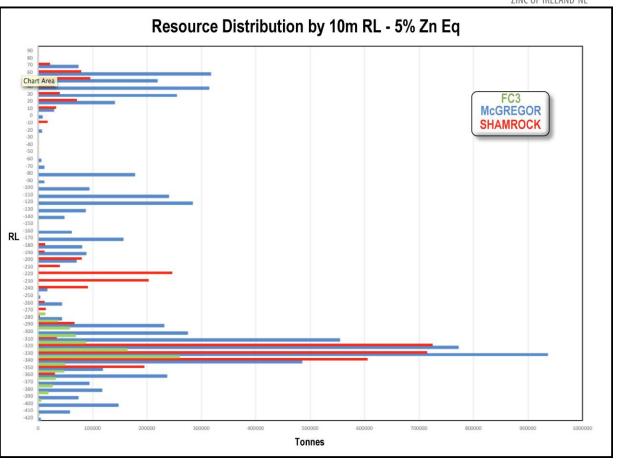
Metal distribution heat map

- Multi-phase Zinc/Lead mineralisation discovered to date over a 1,400m x 400m zone
- Mineralisation from surface to 500m depth with the main zone consistently 100m thick
- Ample scope to join and extend the deposits in all lateral directions note very selective sampling of historic holes in FC-7 and FC-31

## **Kildare Deposit**







The presence of substantial, higher grade portions of the overall resource at relatively shallow depth provides clear opportunities for optimising early cashflow during mine design

## Kildare - Exceptional Metallurgy Performance Confirmed



#### **Zinc concentrate:**

- **96% recovery** of Zinc to concentrate
- **56% Zn** in concentrate
- Minimal Lead in Zinc concentrate



#### **Lead concentrate:**

- **86% recovery** of Lead to concentrate
- **62% Pb** in concentrate
- Minimal Zinc in Lead concentrate

- Minimal deleterious elements in either concentrate
- Standard differential flotation/standard reagent scheme
- Low energy costs for coarse target grind size ( $P_{80}$  150 microns)

For further information on the metallurgical testwork refer to ZMI ASX announcement dated 23 April 2019

## **Kildare – High Level Mining Study**



- Completed by Golder Associates Ireland (with Lisheen Technical and Mining Services and Avoca Geotech)
   in mid-2020
- Based on the development of an underground mining operation at Kildare to produce high quality Zinc and Lead concentrates for European smelters
- High level review of available information and benchmarking relating to Geology and Mineral Resources,
   Mining, Metallurgy and Processing alternatives, Hydrogeology, Tailings, Infrastructure, Environmental and
   Social and Permitting
- Cost models for capital and operating costs also built from an extensive local knowledge base
- Specific results of the Study cannot be released due to ASX rules (all resources are currently Inferred),
  however the study does confirm that various well-established low-cost mining methods are well suited to
  the project
- The study provides a pathway for the next phase of the project including both resource drilling, engineering and metallurgical testing and environmental, social and permitting aspects

## Rathdowney Project – The Way Forward



#### **Advancement of the Kildare Deposit**

Mineral Resource growth through expansion of the existing Resource
 Progress Engineering, Metallurgical and Hydrogeological Studies
 Commence Environmental, Social and Permitting Studies

#### **Overall Project Advancement**

- ☐ Data consolidation and target generation for the entire Rathdowney Trend
- Prioritisation of known drill ready targets
- ☐ Test numerous greenfields targets

#### Zinc of Ireland - Reasons To Invest



- HUGE STRATEGIC LAND POSITION 130km of the highly mineralised Rathdowney Trend
- **EXISTING ZINC RESOURCE** reduces the exploration risk threshold; growth potential
- **RESOURCE UPSIDE POTENTIAL** from both extensional and exploration drilling
- EXCELLENT METALLURGY high quality Zinc and Lead concentrates produced
- HIGH LEVEL STUDY COMPLETED outcomes confirming proposed development approach
- PROVEN BOARD AND MANAGEMENT operational experience in the EU
- STRONG SHAREHOLDER BASE cornerstone shareholders, EU mining experience, tight ownership
- HIGHLY LEVERAGED TO UPSIDE enterprise value of only ~A\$4 million

# Appendix: Additional Information McGregor, Shamrock and FC-3 Inferred Resources



McGregor Shamrock and FC3 Inferred Mineral Resource							
Deposit	ZnEq Cut Off (%)	Mt	Zn%	Pb%	Zn + Pb%	Zn (kt)	Pb (kt)
McGregor	3.5	13.2	6.2	1.0	7.1	815	127
Shamrock	3.5	6.9	5.4	0.9	6.3	376	59
FC-3	3.5	1.5	6.4	0.9	7.3	98	14
Total	3.5	21.7	5.9	0.9	6.9	1,289	201
McGregor	4.0	11.0	6.7	1.1	7.7	736	117
Shamrock	4.0	5.4	6.0	0.9	6.9	325	49
FC-3	4.0	1.2	7.3	1.0	8.3	87	12
Total	4.0	17.6	6.5	1.0	7.5	1,147	178
McGregor	4.5	8.7	7.4	1.2	8.6	641	106
Shamrock	4.5	4.3	6.6	1.0	7.5	282	41
FC-3	4.5	1.0	8.0	1.0	9.0	80	10
Total	4.5	14.0	7.2	1.1	8.3	1,003	156
McGregor	5.0	7.0	8.1	1.4	9.5	565	95
Shamrock	5.0	3.5	7.1	0.9	8.1	248	33
FC-3	5.0	0.9	8.5	1.0	9.5	74	9
Total	5.0	11.3	7.8	1.2	9.0	887	136
McGregor	5.5	5.9	8.7	1.5	10.2	510	86
Shamrock	5.5	3.1	7.4	1.0	8.4	228	30
FC-3	5.5	0.8	9.0	1.0	10.0	70	8
Total	5.5	9.7	8.3	1.3	9.6	808	124
McGregor	6.0	5.0	9.3	1.6	10.9	465	78
Shamrock	6.0	2.6	7.7	1.0	8.8	204	27
FC-3	6.0	0.7	9.2	1.0	10.2	68	8
Total	6.0	8.4	8.8	1.3	10.1	737	113

#### **ZnEq Calculation:**

In order to determine appropriate Zinc and Lead prices for use in calculating a ZnEq cut off grade, the monthly average LME spot prices for Pb and Zn were assessed for the 5 years between June 2014 and June 2019, resulting in an average price of US\$2,468 per tonne for Zn and US\$2,047 per tonne for Pb. For the purposes of calculating a ZnEq cut off, these two prices were rounded to \$2,500 per tonne for Zn and \$2,000 per tonne for Pb, resulting in a 0.8 ratio between Pb and Zn. All elements included in the ZnEq formula calc (i.e. zinc and lead) have a reasonable potential to be recovered and sold.

The resultant ZnEq formula used in resource reporting is: ZnEq = (Zn% \* Zn recovery) + (0.8\* (Pb% \* Pb recovery)). ZnEq = (Zn% \* 0.9639) + (0.8\* Pb% \* 0.8644).

For further information on the Mineral Resource Estimate and ZnEq calculations refer to ZMI ASX announcement dated 31 July 2019.

ZMI confirms that all material assumptions referenced on 31 July 2019, continue to apply and have not materially changed.

#### **Contact Information**

#### Richard Monti – Non-Executive Chairman





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## **Competent Person's Statements**



The information in this report that relates to exploration results is based on information compiled by Mr. Greg Hope, a Competent Person who is a Member of the Australian Institute of Geoscientists. Mr. Hasson is Zinc of Ireland NL's Exploration Manager. Mr. Hope has sufficient experience, which is relevant to the style of mineralisation and types of deposits under consideration and to the activity which has been undertaken to qualify as a Competent Person as defined in the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code). Mr. Hasson consents to the inclusion in the presentation of the matters based on his information in the form and context in which it appears.

The information in this report that relates to the Mineral Resources is based on information compiled by Brian Wolfe, Senior Resource Consultant of International Resource Solutions Pty Ltd. Mr. Wolfe is a Member of the Australian Institute of Geoscientists and has sufficient experience which is relevant to the style of mineralisation and types of deposits under consideration and to the activity which has been undertaken to qualify as a Competent Person as defined in the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code). Mr. Wolfe consents to the inclusion in the presentation of the matters based on his information in the form and context in which it appears.

The information in this document that relates to mineral resource estimates is extracted from the ASX announcement entitled "Mineral Resource Estimate Update" dated 8 September 2020 and is available to view on <a href="www.zincofireland.com">www.zincofireland.com</a>. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and, in the case estimates of Mineral Resources, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The Company confirms that the form and context in which Competent Person's findings are presented here have not been materially modified from the original market announcement.